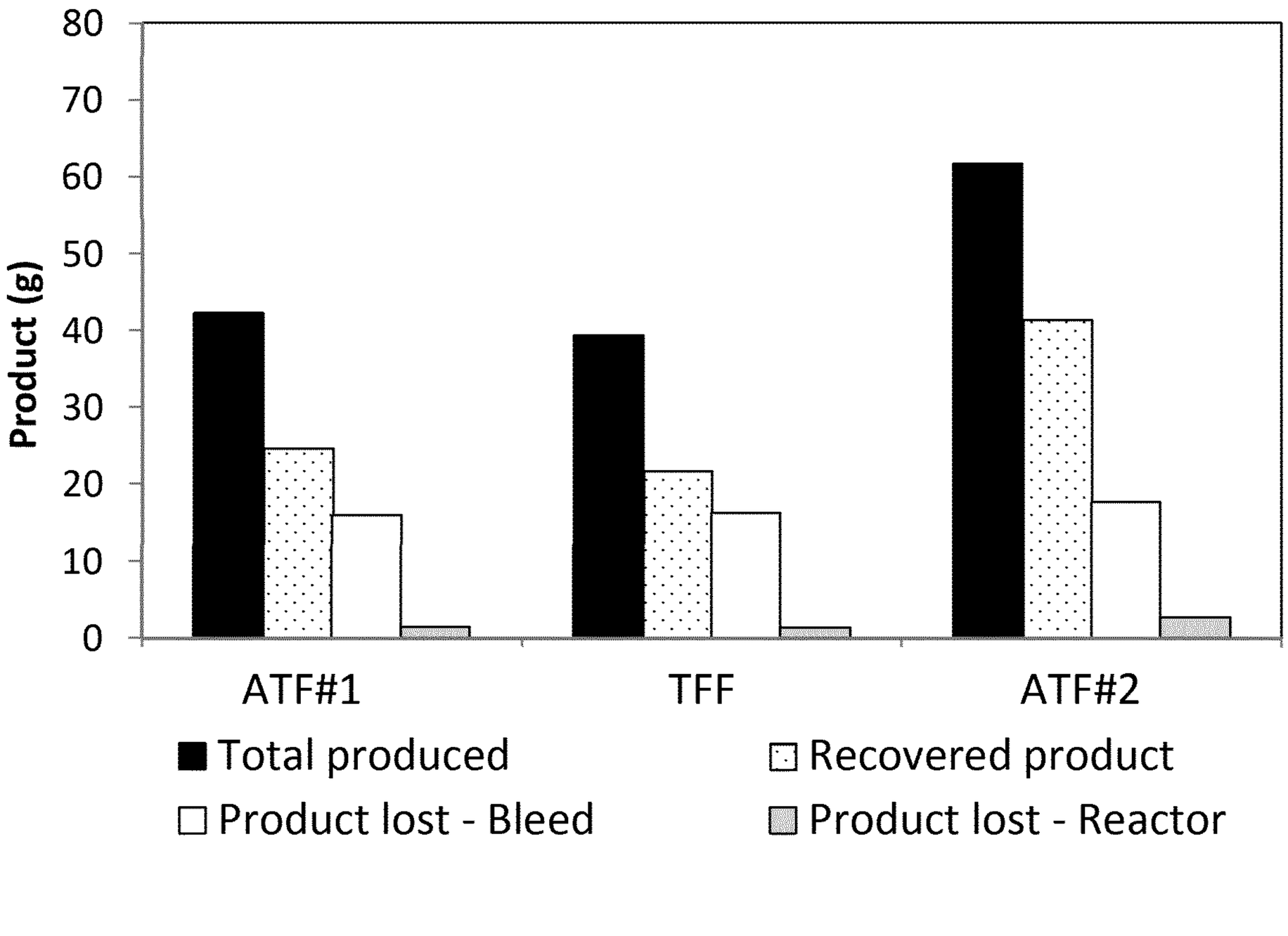

80
70
60
50
40
30
20
10
0
Product (g)
ATF#1
TFF
ATF#2
Total produced
Recovered product
Product lost - Bleed
Product lost - Reactor

Figure 1

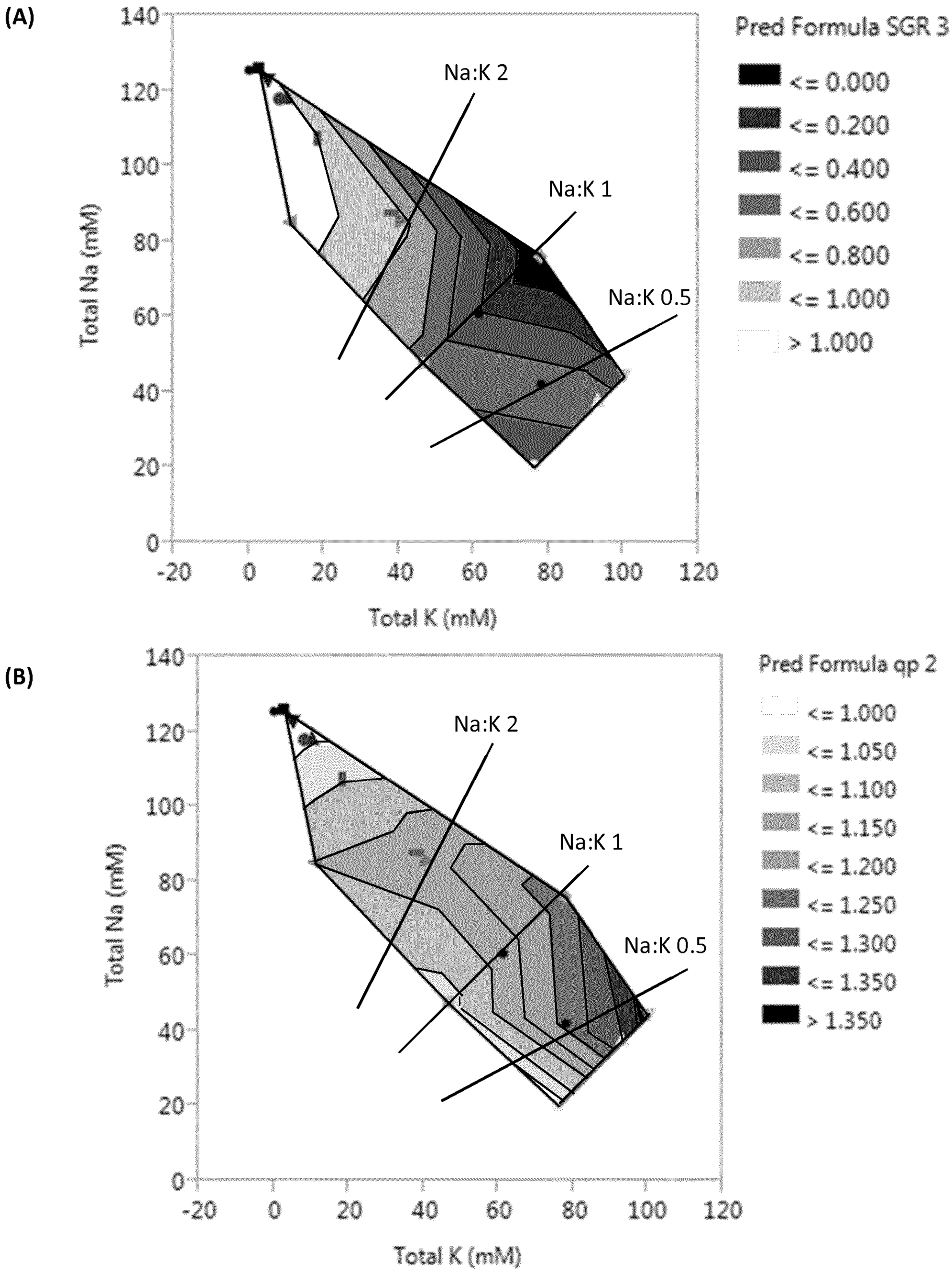
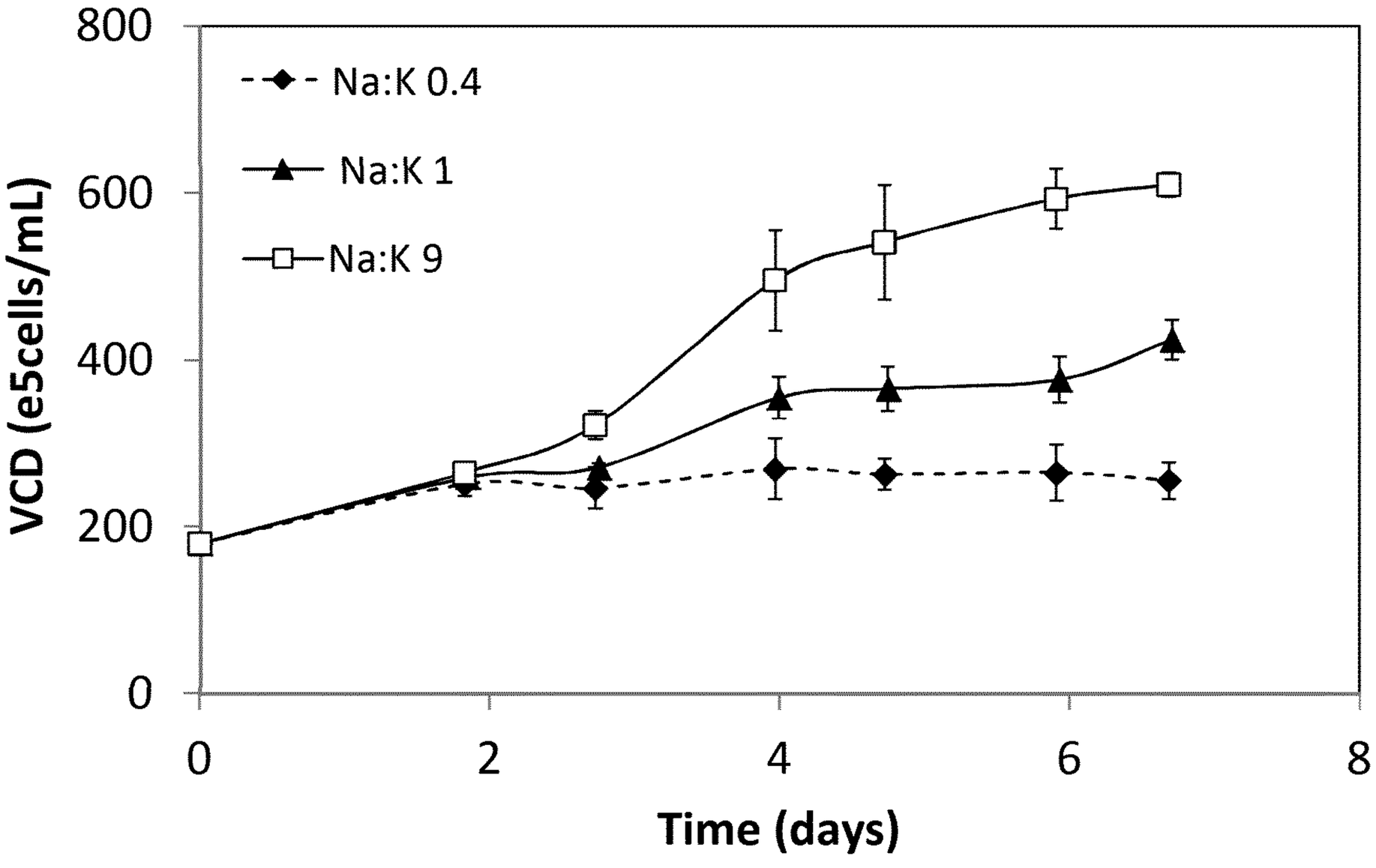

(A)
Total Na (mM)
Total K (mM)
Na:K 2
Na:K 1
Na:K 0.5
Pred Formula SGR 3
<= 0.000
<= 0.200
<= 0.400
<= 0.600
<= 0.800
<= 1.000
> 1.000
(B)
Total Na (mM)
Total K (mM)
Na:K 2
Na:K 1
Na:K 0.5
Pred Formula qp 2
<= 1.000
<= 1.050
<= 1.100
<= 1.150
<= 1.200
<= 1.250
<= 1.300
<= 1.350
> 1.350

Figure 2

(C)


800
600
400
200
0
VCD (e5cells/mL)
Na:K 0.4
Na:K 1
Na:K 9
0
2
4
6
8
Time (days)

(D)

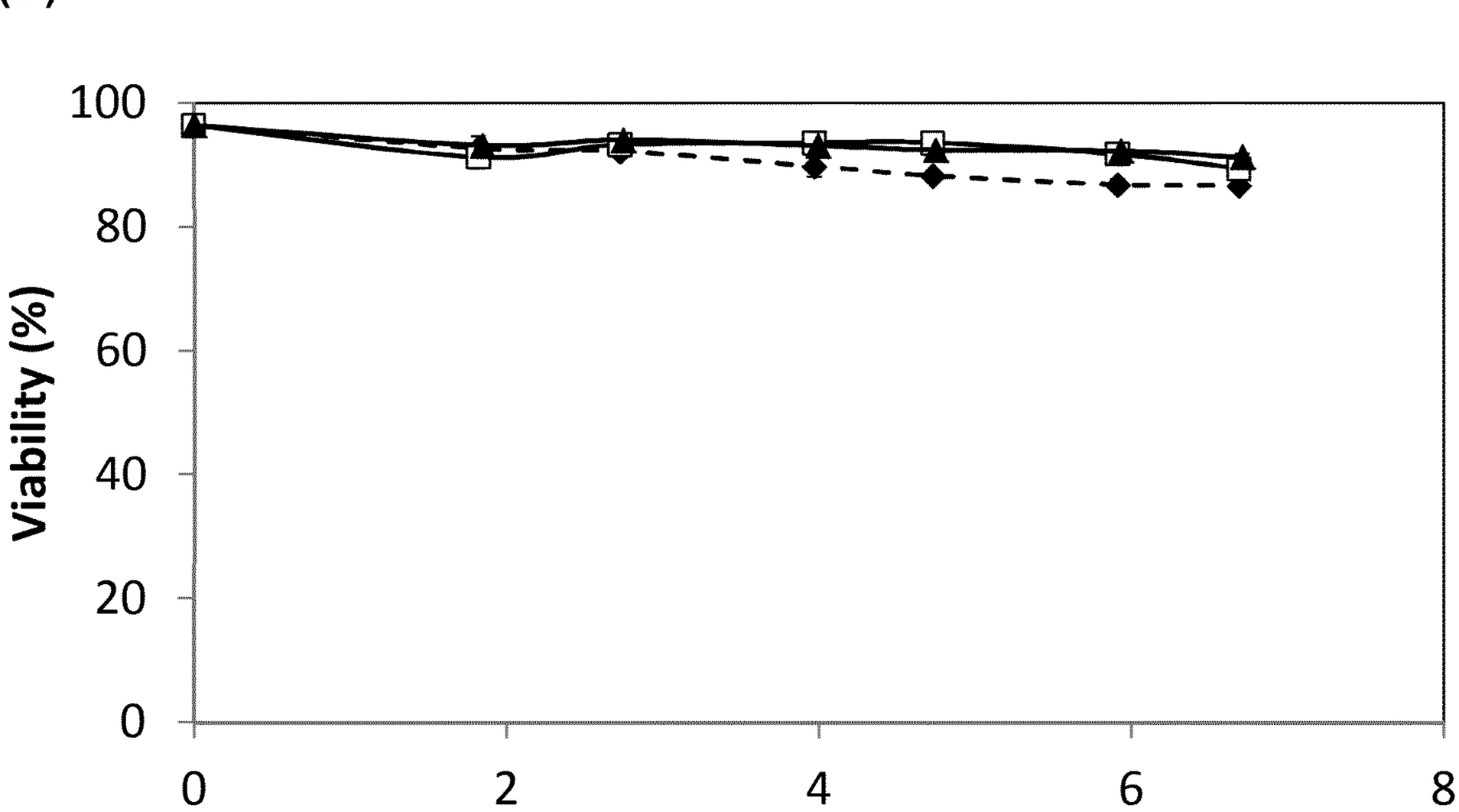

100
80
60
40
20
0
Viability (%)
0
2
4
6
8
Time (days)

Figure 2

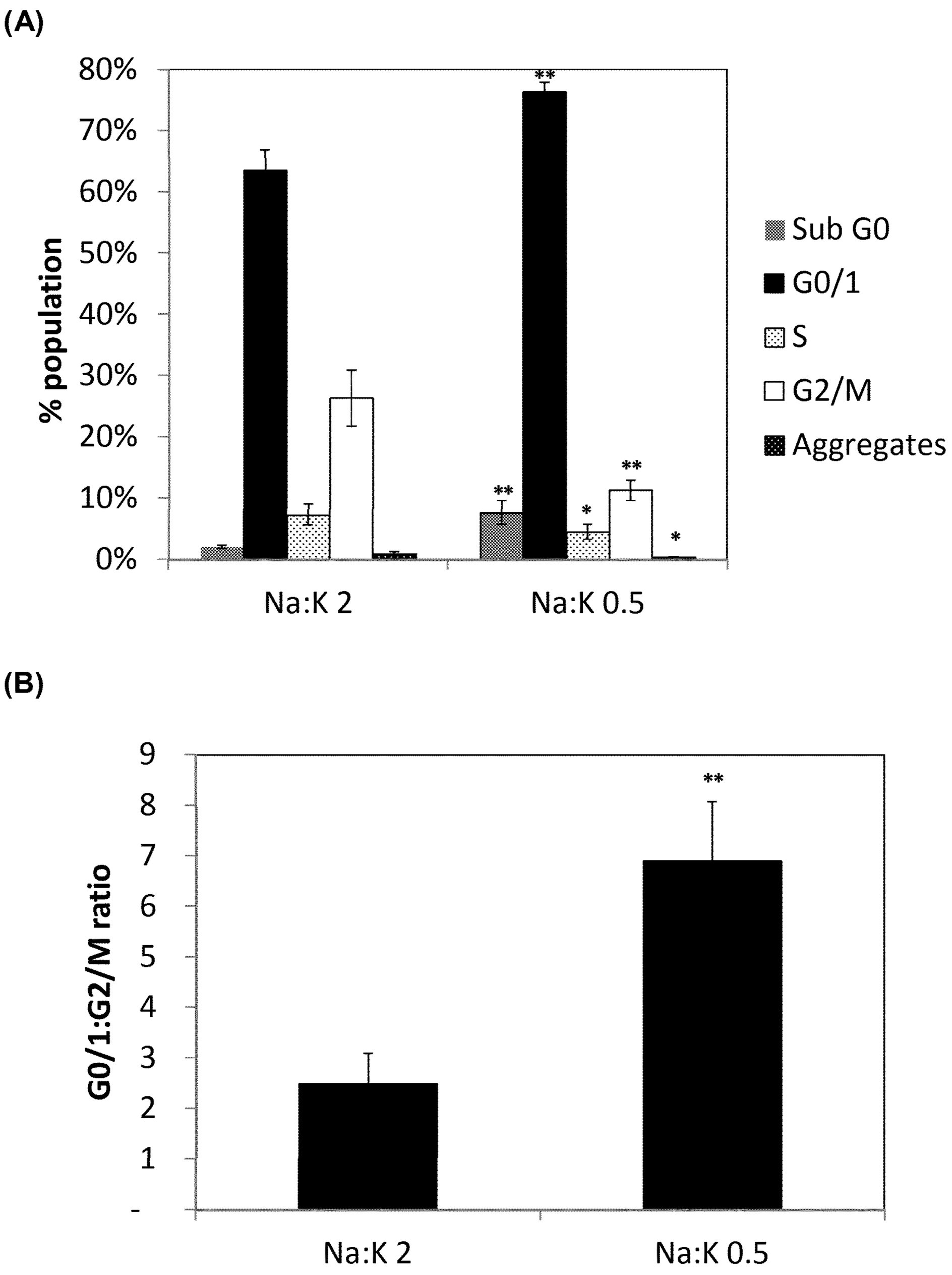
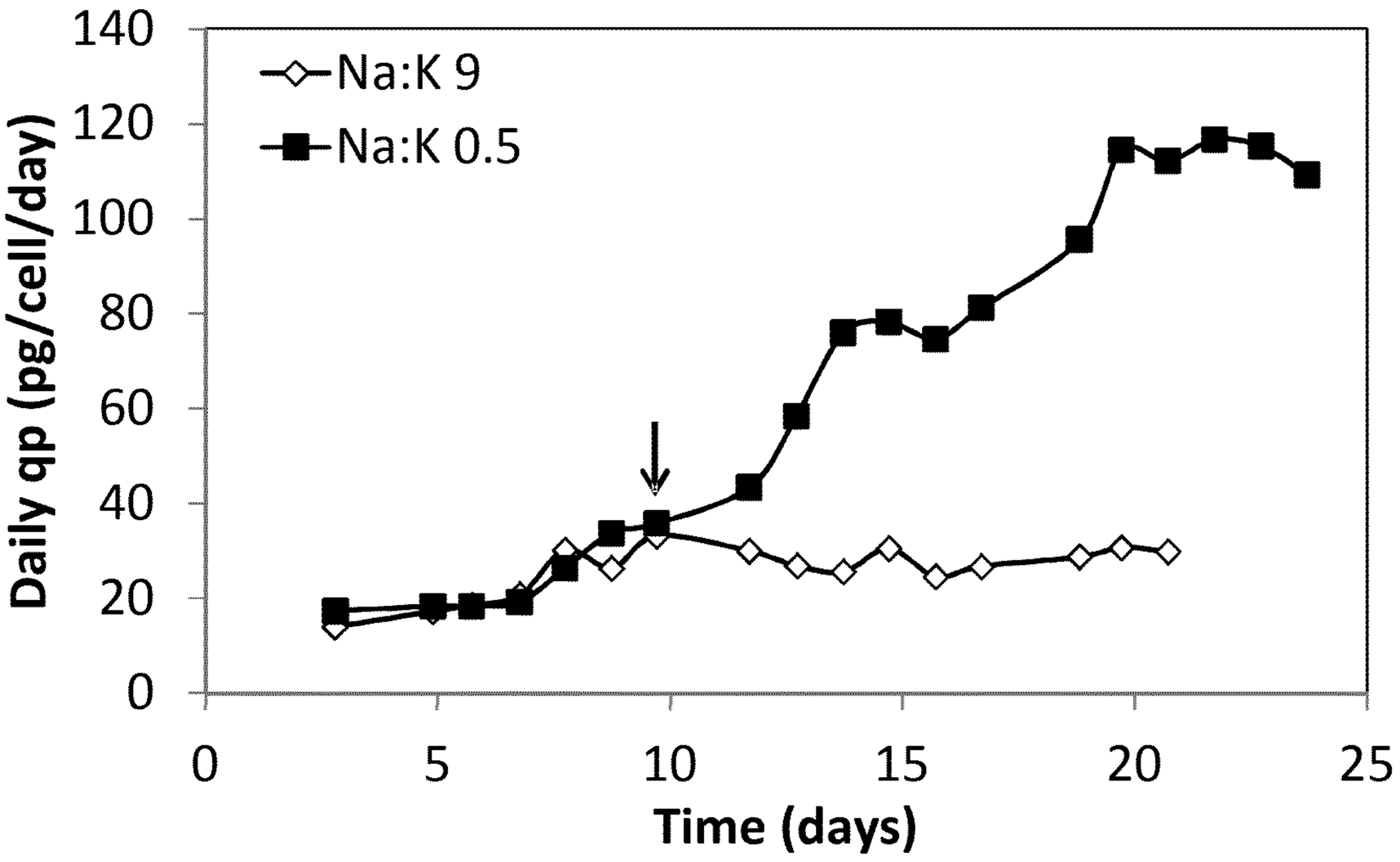

(A)
80%
70%
60%
50%
40%
30%
20%
10%
0%
% population
**
**
*
**
*
Sub G0
G0/1
S
G2/M
Aggregates
Na:K 2
Na:K 0.5
(B)
9
8
7
6
5
4
3
2
1
-
G0/1:G2/M ratio
**
Na:K 2
Na:K 0.5

Figure 3

(A)


Na:K 9
Na:K 0.5
Daily qp (pg/cell/day)
140
120
100
80
60
40
20
0
0
5
10
15
20
25
Time (days)

(B)

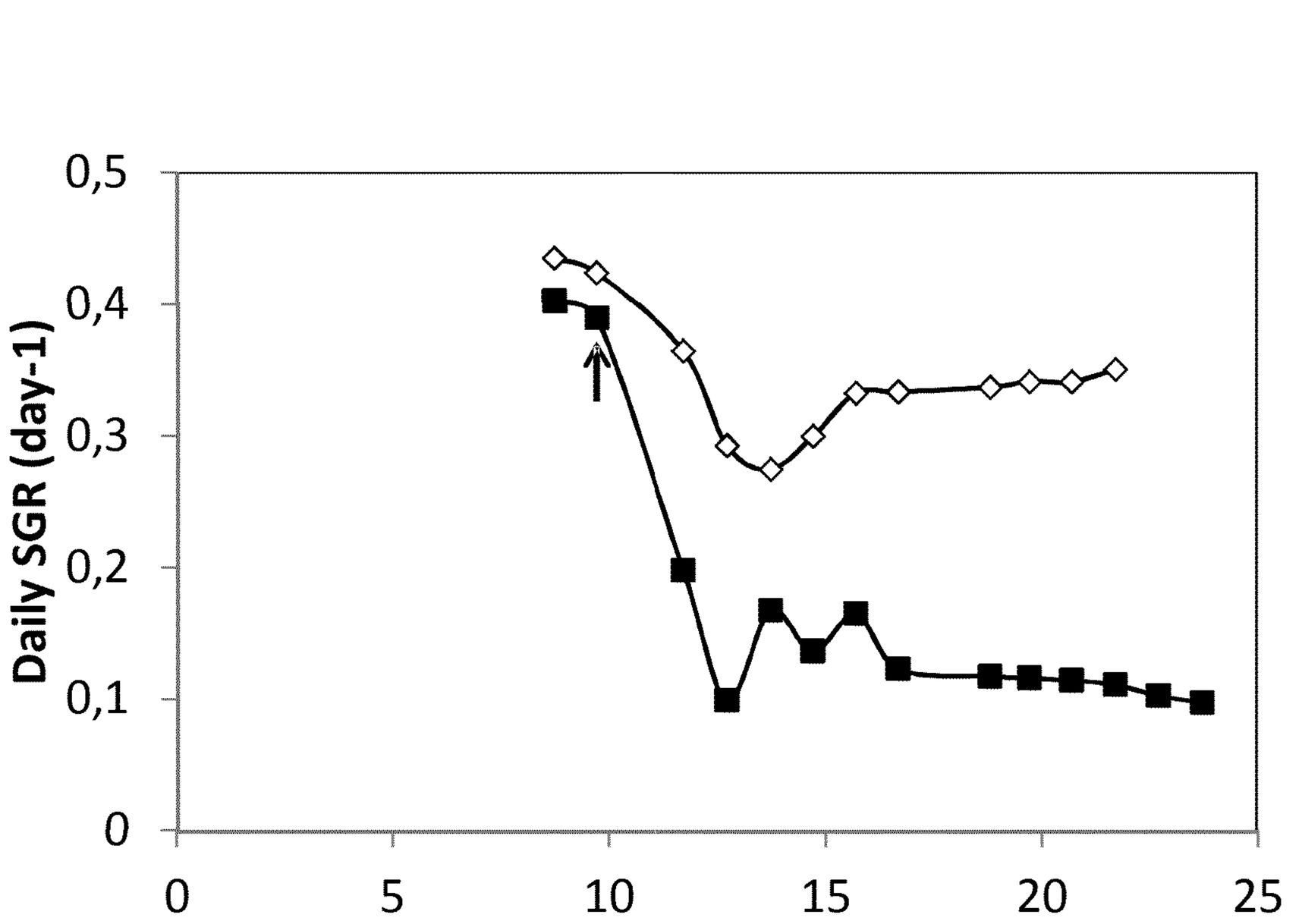
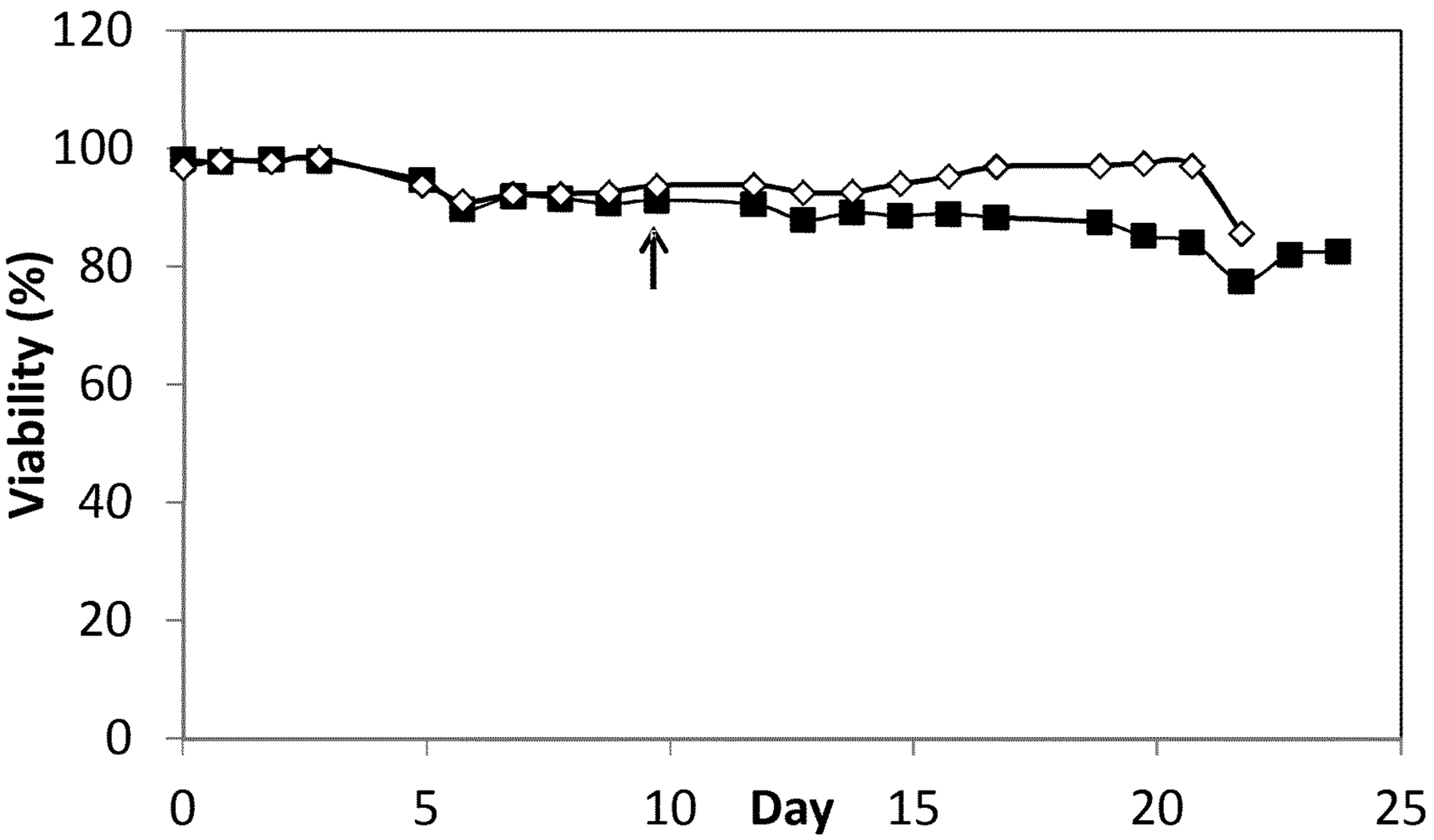

Daily SGR (day-1)
0,5
0,4
0,3
0,2
0,1
0
0
5
10
15
20
25
Time (days)

Figure 4

(C)


120
100
80
60
40
20
0
Viability (%)
0
5
10
Day
15
20
25

(D)

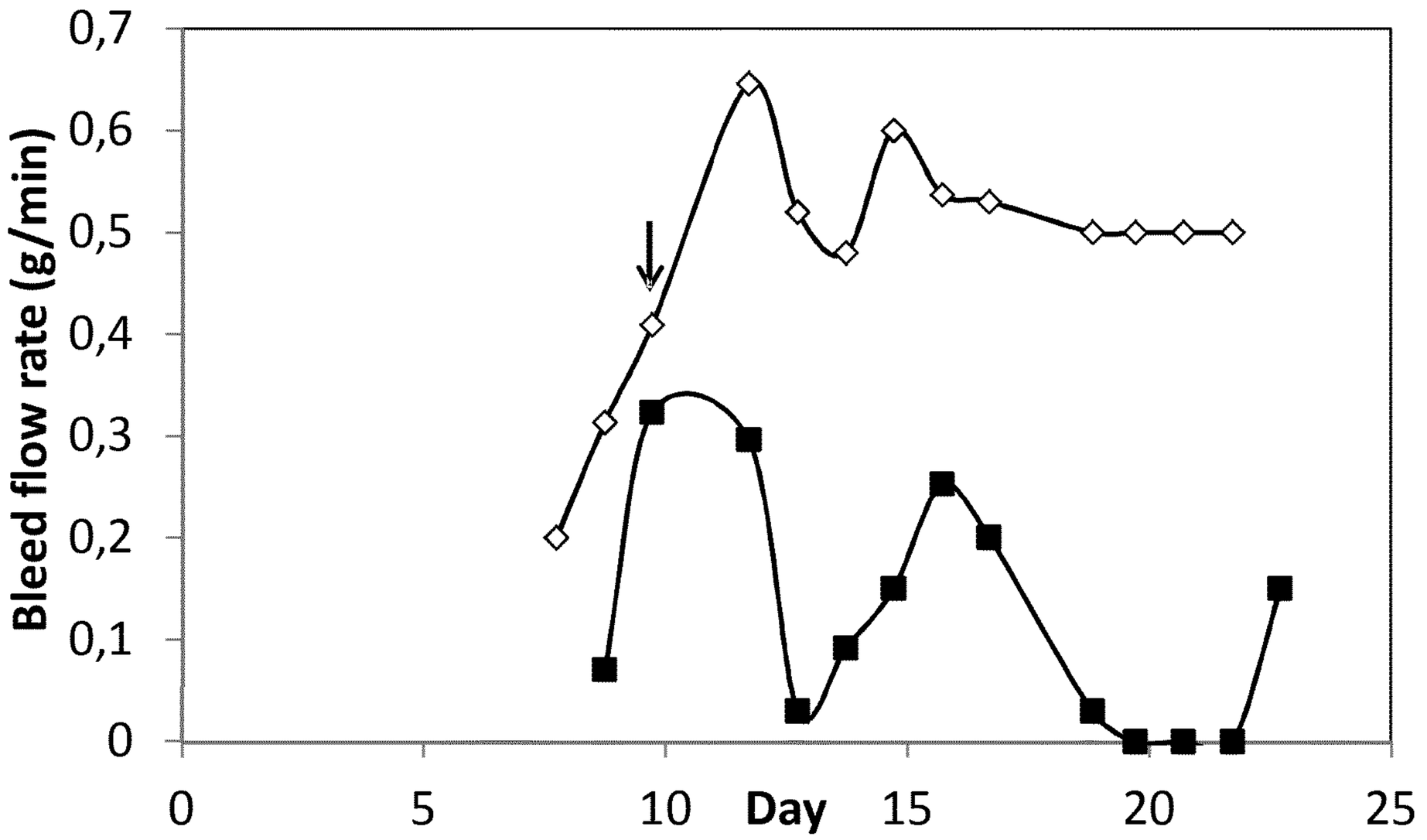

0,7
0,6
0,5
0,4
0,3
0,2
0,1
0
Bleed flow rate (g/min)
0
5
10
Day
15
20
25

Figure 4

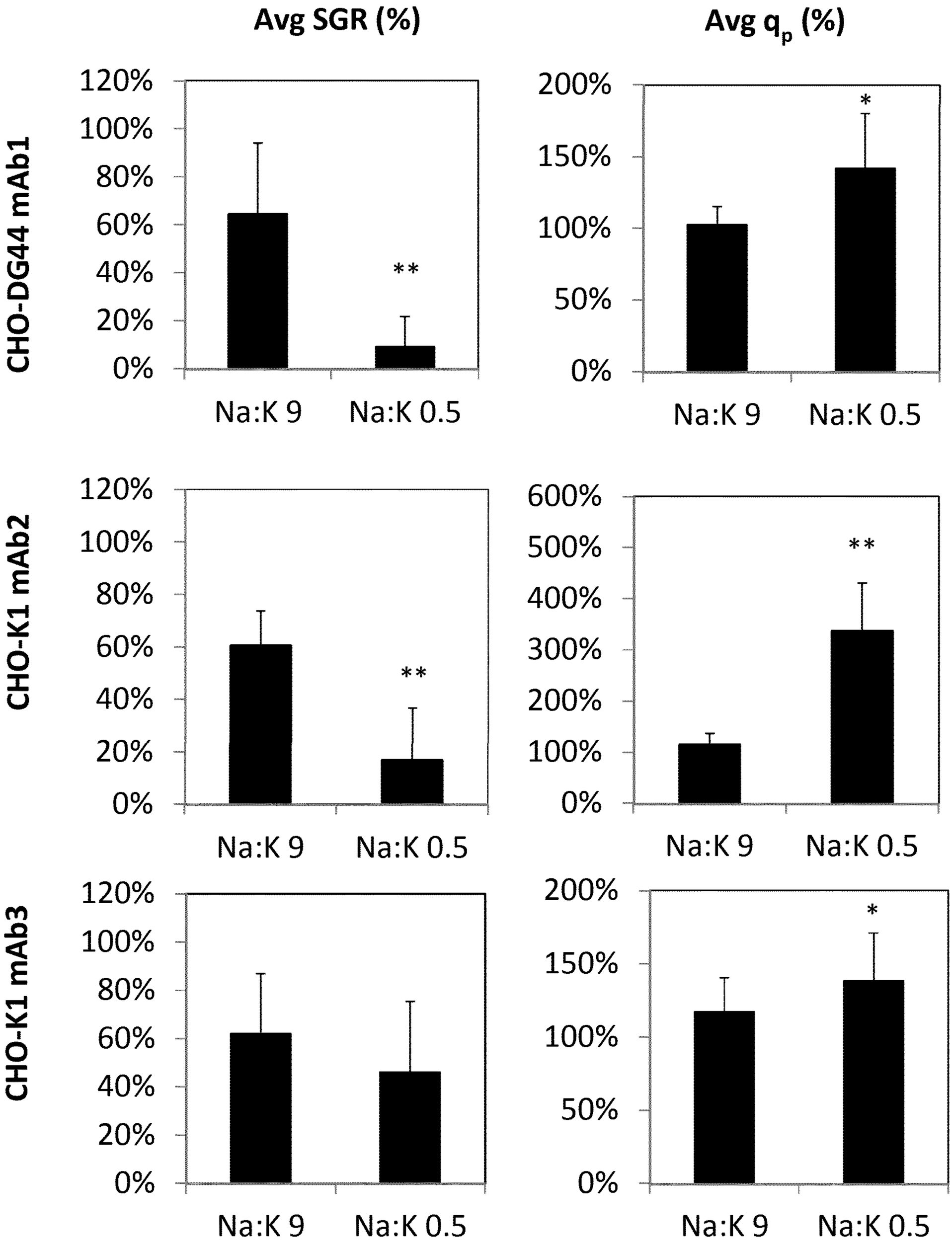

Avg SGR (%)
Avg q_p (%)
CHO-DG44 mAb1
CHO-K1 mAb2
CHO-K1 mAb3
120%
100%
80%
60%
40%
20%
0%
200%
150%
50%
600%
500%
400%
300%
*
**
Na:K 9
Na:K 0.5

Figure 5